JRM:lmp 4/24/02



PATENT ATTY. REF. NO. P0249

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In re application of

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Levy et al.

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Serial No.: 09/731,456

Technology Center 2600

Filed: December 6, 2000

Examiner:

For: AUTHENTICATING MEDIA SIGNALS

BY ADJUSTING FREQUENCY

CHARACTERISTICS TO REFERENCE VALUES

Date: April 25, 2002

Art Unit 2621

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Joel R. Mever

Attorney for Applicant(s)

INFORMATION DISCLOSURE STATEMENT

ASSISTANT COMMISSIONER FOR PATENTS Washington, DC 20231

Applicants submit herewith information of which they are aware, and which they believe may be material to the examination of the application and in respect of which there may be a duty to disclose in accordance with 37 C.F.R. § 1.56. The information is listed on the attached Form PTO-1449 and copies are enclosed.

The submission of information on the attached Form PTO-1449 is not intended as an admission that any such information constitutes prior art against the claims of the application under examination. Applicants do not waive any right to take any appropriate action to antedate or otherwise remove any information from the attached Form PTO-1449.

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If a first Office action on the merits was mailed prior to the mailing of this Information Disclosure Statement, please charge to Deposit Account No. 50-1071 any fees that may be required for considering this Information Disclosure Statement under 37 C.F.R. § 1.17(p).

Date: April 25, 2002

PATENT TRADEMARK OFFICE

Phone: 503-885-9699 FAX: 503-885-9880

Respectfully submitted,

DIGIMARC CORPORATION

Joel R. Meyer

Registration No. 37,677

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INFORMATION DISCLOSURE STATEMENT

 Docket:
 P0249
 Ser. No. 09/731,456

 Applicant:
 Levy et al.

 Filed:
 12/6/00
 Group:
 2621

Ex'r Initial	Number	US Patent Applicati Date	Inventor	RECEIVE
ex F Initial	60/180,364	2/4/00	Davis et al.	HECLIVE
	60/198,138	4/17/00	Alattar	MAY 0 1 200
	60/198,857	4/21/00	Davis et al.	WALL OF TOX
	09/198,022	11/23/98	Rhoads	Technology Center
	09/198,022	3/15/00	Davis et al.	3,
	09/323,803	7/19/00	Sharma et al.	
	09/618,948	7/25/00	Carr et al.	
	09/625,377	8/24/00	Tian et al.	
	09/643,779	10/11/00	Ahmed	-
	09/089,230	US Patent Publicati	<u> </u>	
			Inventor	Class
Ex'r Initial		Date 1/24/02	Alattar et al.	Class
	20020009208	1/24/02	Alattai et ai.	
		IIC Detect De		
		US Patent Do	Inventor	Class
Ex'r Initial		Date 3/28/78	Pearce	Class
	4,081,132	10/29/85	Carlson	
	4,550,395		Briggs et al.	
	5,617,119	4/1/97	Rhoads	
	5,636,292	6/3/97	Barton	
	5,646,997	8/97	Powell et al.	
<u></u>	5,721,788	2/98		
	5,745,604	4/28/98	Rhoads	
	5,761,686	6/2/98	Bloomberg	
	5,809,139	9/15/98	Girod et al.	
	5,809,160	9/15/98	Powell et al.	
	5,825,892	10/20/98	Braudaway et al.	
	5,835,639	11/10/98	Honsinger et al.	
	5,841,886	11/24/98	Rhoads	
	5,862,260	1/19/99	, ''Rhoads	
	5,875,249	2/23/99	Mintzer et al.	
	5,915,027	6/22/99	Cox et al.	
	5,915,044	6/22/99	Gardos et al.	
	5,930,377	7/27/99	Powell et al.	
	5,933,798	8/3/99	Linnartz	
	5,974,548	10/26/99	Adams	
	6,026,193	2/15/00	Rhoads	
	6,064,764	5/16/00	Bhaskaran et al.	
	6,065,119	5/16/00	Sandford, II et al.	
	6,122,403	9/19/00	Rhoads	
	6,226,387	5/1/01	Tewfik et al.	
	6,240,121	5/01	Senoh	
	6,246,777	6/12/01	Agarwal et al.	

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INFORMATION:
DISCLOSURE STATEMENT

APR 2 9 2002

Applicant: Levy et al.
Filed: 12/6/00

Ser. No. 09/731,456

Group: 2621

				RECE	
	6,272,634	8/7/01	Tewfik et al.		
	6,275,599	8/14/01	Adler et al.	MAY 0 1	
	6,285,775	9/4/01	Wu et al.		
	6,332,030	12/18/01	Manjunath et al.	Technology Co	
	6,332,031	12/18/01	Rhoads et al.		
		Foreign Patent	Documents		
Ex'r Initial	Number	Date	Country	Class	
	EP0891071	1/13/99	EPO		
	EP0953938	11/3/99	EPO		
	EP1041815	4/00	EPO		
	WO00/33282	6/8/00	PCT		
	WO00/75925	12/14/00	PCT		
		Other Refe	rences		
x'r Initial			Cite		
	Szepanski, W., "A Signal Theoretic Method for Creating Forgery-Proof Documents for Automatic Verification," <i>IEEE Proc. 1979 Carnahan Conf. con Crime Countermeasures</i> , May 1979, pp. 101-109.				
	Matthews, R., "When Seeing is not Believing," New Scientist, No. 1895, Oct. 16, 1993, pp. 13-15.				
			nera: Restoring Credibility to the		
	Image," IEEE Trans. Consumer Electronics,, Vol. 39, No. 4, Nov. 1993, pp. 905-910.				
	Walton, S., "Image Authentication for a Slippery New Age," Dr. Dobb's Journal, Apr. 1995, pp.				
	18-20, 22, 24, 26, 82 and 84-87.				
	Schneider, Mr., "A Robust Content Based Digital Signature for Image Authentication," <i>IEEE Proc.</i>				
	Int. Conf. on Image Processing, Sept. 1996, pp. 227-230 (vol. 3).				
	Lin, CY. et al., "Generating Robust Digital Signature for Image/Video Authentication," <i>Proc. Multimedia and Security Workshop at ACM MULTIMEDIA'98</i> , Sept. 1998, pp. 49-54.				
	Dittman, J., "Chapter 3: Telltale Watermarking," in Multiresolution Digital Watermarking: Algorithms and Implications for Multimedia Signals, Ph.D. thesis at Univ. of Toronto, 1999, pp. 23-52.				
	Lin, CY. et al., "Issues and Solutions for Authenticating MPEG Video," Proc. SPIE vol. 3657: Security and Watermarking of Multimedia Contents, Jan. 1999, pp. 54-65.				
	Xie, L. et al., "Secure MPEG Video Communications by Watermarking," <i>Proc. Conf. of ATIRP</i> (Advanced Telecommunications and Information Distributions Research Project), Feb. 199, pp. 459-462.				
	Dittmann, J. et al., "Content-Based Digital Signature for Motion Pictures Authentication and Content-Fragile Watermarking," <i>IEEE Proc. Int. Conf. on Multimedia Computing and Systems</i> , Jun. 1999, pp209-213				
	Lamy, P. et al., "Content-Based Watermarking for Image Authentication," <i>Proc.</i> 3 rd Int. Workshop on Information Hiding, Sept/Oct. 1999, pp. 187-198.				
	Queluz, M.P. et al., "Spatial Watermark for Image Verification," Proc. SPIE vol. 3971: Security and Watermarking of Multimedia Contents II, Jan. 2000, pp. 120-130.				
	Proc. SPIE vol. 416.	3971: Security and Watermar	cheme for Multimedia Content king of Multimedia Contents II,	Jan. 2000, pp. 404-	
			Authentication," Proc. Conf. of Aution Research Project), Mar. 2		

Examiner Signature:	Date Considered:
*Examiner: Initial if considered, whether or not in conformance	with MPEP 609: draw line through cite if

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APR 2 9 2002

INFORMATION DISCLOSURE STATEMENTS

#Docket: P0249 Ser. No. 09/731,456
Applicant: Levy et al.
Filed: 12/6/00 Group: 2621

	Rey, C. et al., "Blind Detection of Malicious Alterations on Still Images Using Robust Watermarks," Proc. II Seminar on Secure Images and Image Authentication, Apr. 2000, pp. 7/1-	
	Bassali et al., "Compression Tolerant Watermarking for Image Verification," IBM India Research Lab, date unknown, 4 pages.	EIVED
	Frequently Asked Questions EPSON Image Authentication System (IAS) October 5, 1999, 3	0 1 2002
	Chae et al. "A Robust Embedded Data from Wavelet Coefficients" Department of Electrical and	
	Computer Engineering, University of California. Technolog	y Center 2600
	Cooklev et al., "A Multiresolution Technique for Watermarking Digital Images", ICCE, June 11-13, 1997, pp. 354-355.	
	Dugad et al., "A New Wavelet-Based Scheme for Watermarking Images", IEEE October 4-7, 1998, pp. 419-423.	
	Hsu et al., "Multiresolution Watermarking for Digital Images", IEEE, vol. 45, no. 8, pp. 1097-1101, August, 1998.	
	Inoue et al., "A digital Watermark Methods Using the Wavelet Transform for Video Data", IEICE Trans. Fundamentals, Vol. E83-A, No. 1, Jan 2000, pp. 96.	
	Kim et al., "A Robust Wavelet-Based Digital Watermarking Using Level-Adaptive Thresholding", IEEE 1999, pp. 226-230.	
	Kim et al., "Wavelet Based Watermarking method for Digital Images Using the Human Visual System", IEEE 1999, pp. 80-83.	
• • • • • • • • • • • • • • • • • • • •	Kundur et al., "A Robust Digital Image Watermarking Method Using Wavelet-Based Fusion", Int. Conf. On Image Proc., Oct. 1997, pp. 544-547.	
	Kundur et al., "Digital Watermarking for Telltale Tamper Proofing and Authentication", IEEE, vol. 87, no. 7, pp. 1167-1180.	
	Kundur et al., "Digital Watermarking Using Multiresolution Wavelet Decomposition", IEEE, ICASSP '98, pp. 2969-2972, vol. 5.	
_,,,	Matsui et al., "Embedding a Signature to Pictures Under Wavelet Transformation", <u>Transaction of the Institute of Electronics Information and Communication Engineers D-11</u> , vol. J79D-11, no. 6, June 1996, pp. 1017-1024.	
	Matsui et al., "Use of the Wavelet Transformation to Embed Signatures in Images", Systems and Computers in Japan, January 1997, vol. 28, no. 1, pp. 87-94.	
ť	Meerwald et al., "A Survey of Wavelet-domain Watermarking Algorithms", Security and Watermarking of Multimedia Contents III, January 2001, vol. 4314, pp. 505-516.	
	Onishi et al., "A Method of Watermarking with Multiresolution Analysis and Pseudo Noise Sequences", Systems and Computers in Japan, vol. 29, no. 5, pp. 11-19, May 1998.	
	Ohnishi et al., "Embedding a Seal into a Picture Under Orthogonal Wavelet Transform, Proceedings of MULTIMEDIA '96, IEEE, pp. 514-521.	
;c	Swanson et al., "Multiresolution Scene-Based Video Watermarking Using perceptual Models", IEEE, May 1998, vol. 16, no. 4, pp. 540-550.	
9	Tsekeridou et al., "Embedding self-similar watermarks in the wavelet domain", IEEE, ICASSP 2000, pp. 1967-1970.	
-	Tsekeridou et al., "Wavelet-based self-similar watermarking for still images", 2000 IEEE	
	International Symposium on Circuits and Systems, pp. 220-223. Wang et al., "Wavelet Based Digital Image Watermarking", Optics Express, vol. 3, no. 12, pp.	
	491-496, Dec. 7, 1998.	
/	Wei et al., "Perceptual Digital Watermark of Images Using Wavelet Transform", IEEE Transactions on Consumer Electronics, vol. 44, no. 4, pp. 1267-1272, Nov. 1998.	

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*Examiner: Initial if considered, whether or not in conformance	with MPEP 609; draw line through cite if

not in conformance and not considered. Include copy of this form with next communication to applicant.

Page 4 of 4

INFORMATION DISCLOSURE STATEMENT

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 Ser. No. 09/731,456

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 Group: 2621
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Xie et al., "Joint Wavelet Compression and Authentication Watermarking, ICIP, Oct. 4-7, 1998, pp. 427-431.
Zhu et al., "Multiresolution Watermarking for Images and Video", IEEE Transactions on Circuits and Systems for Video Technology, Vol. 9, No. 4, June 1999, pp. 545-550.
 Cox, "A Secure, Imperceptible yet Perceptually Salient, Spread Spectrum Watermark for Multimedia", Southcon June 1996, pages 192-197.
 Hsu, "DCT-Based Watermarking for Video", IEEE 1998, pages 206-216.



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MAY 0 1 2002

Technology Center 2600

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